THE ASTROPHYSICAL JOURNAL

Founded in 1895 by George E. Hale and James E. Keeler

ROBERT C. KENNICUTT, JR.
Editor-in-Chief
Steward Observatory
University of Arizona

A. DALGARNO
Letters Editor
Harvard-Smithsonian
Center for Astrophysics

JAMES W. LIEBERT
Associate Editor-in-Chief
Steward Observatory
University of Arizona

EUGENE H. AVRETT
Deputy Letters Editor
Harvard-Smithsonian
Center for Astrophysics

JULES P. HALPERN
Associate Letters Editor
Columbia University

ANNEILA I. SARGENT
Associate Letters Editor
California Institute of Technology

JOSEPH I. SILK
Associate Letters Editor
University of California, Berkeley

AAS PUBLICATIONS BOARD

BRUCE G. ELMEGREEN (1999–2002), *Chairperson*
IBM TJ Watson Research Center

SUSAN TEREBEY (1997–2000)
Extrasolar Research Corporation

ALYSSA A. GOODMAN (1998–2001)
Harvard University

JOEL E. TOHLINE (1999–2001)
Louisiana State University

RONALD E. TAAM (1999–2002)
Northwestern University

JEAN TURNER (2000–2003)
University of California, Los Angeles

RAYMOND CARLBERG (2000–2003)
University of Toronto

Publication Manager: JULIE STEFFEN

Production Manager: CAROLYN CHMIEL

Chief Manuscript Editor: GERALDINE BRADY

Manuscript Editors: WALTER G. GLASCOFF III, BETH GARRISON, THAD A. DORIA, PAUL RUICH, SHARON JENNINGS, STEPHANIE O. NEVINS, ELIZABETH HUYCK, PETER M. RIVARD, ERIC SHUTT, KATHRYN KRAYNIK, HEATHER ANTTI, ROCHELLE LODDER, SHARON L. COMSTOCK, SHANE T. LIEF, RACHEL L. DRZEWICKI, AND NORA HOSTETLER

Production Staff: CINDY GARRETT, MICHAEL SPINELLA, TIMOTHY HARPER, BENJAMIN GETTING, CECILIA HILGEMAN, TARA SCHULEY, AND MIKKI SMITH

Cambridge Editorial Office: ANGELA BROWN, MARY GUILLEMETTE, LAURIE ELLIS, KRISTA WOODBRIDGE, MELAINA A. E. GOVERNATORE, AND JOAN M. FLANAGAN

VOLUME 530, PART 2

2000 FEBRUARY 10 AND FEBRUARY 20

PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS FOR
THE AMERICAN ASTRONOMICAL SOCIETY

© 2000 BY THE AMERICAN ASTRONOMICAL SOCIETY. ALL RIGHTS RESERVED.
PUBLISHED THREE TIMES A MONTH

COMPOSED BY THE UNIVERSITY OF CHICAGO PRESS, CHICAGO, ILLINOIS, U.S.A.

PRINTED BY THE MACK PRINTING GROUP

EASTON, PENNSYLVANIA, U.S.A.

THE ASTROPHYSICAL JOURNAL LETTERS

CONTENTS OF VOLUME 530, PART 2

2000 FEBRUARY 10, NUMBER 1

	Page
STATISTICS OF DARK MATTER HALOS FROM GRAVITATIONAL LENSING *Bhuvnesh Jain and Ludovic Van Waerbeke*	L1
HAS BLENDING COMPROMISED CEPHEID-BASED DETERMINATIONS OF THE EXTRAGALACTIC DISTANCE SCALE? *Brad K. Gibson, Philip R. Maloney, and Shoko Sakai*	L5
ENVIRONMENT OF THE GAMMA-RAY BURST GRB 971214: A GIANT H II REGION SURROUNDED BY A GALACTIC SUPERSHELL *Sang-Hyeon Ahn*	L9
HUBBLE SPACE TELESCOPE AND VERY LARGE ARRAY OBSERVATIONS OF THE H_2O GIGAMASER GALAXY TXS 2226−184 *Heino Falcke, Andrew S. Wilson, Christian Henkel, Andreas Brunthaler, and James A. Braatz*	L13
THE DWARF IRREGULAR GALAXY UGC 7636 EXPOSED: STRIPPING AT WORK IN THE VIRGO CLUSTER *Henry Lee, Michael G. Richer, and Marshall L. McCall*	L17
ULTRACOMPACT X-RAY BINARIES IN GLOBULAR CLUSTERS: VARIABILITY OF THE OPTICAL COUNTERPART OF X1832−330 IN NGC 6652 *Eric W. Deutsch, Bruce Margon, and Scott F. Anderson*	L21
THE EVOLUTIONARY STATUS OF SS 433 *Andrew R. King, Ronald E. Taam, and Mitchell C. Begelman*	L25
DISCOVERY OF CIRCULARLY POLARIZED RADIO EMISSION FROM SS 433 *Robert Fender, David Rayner, Ray Norris, R. J. Sault, and Guy Pooley*	L29
THE ORBITAL PERIOD OF THE Be/NEUTRON STAR BINARY RX J0812.4−3114 *Robin H. D. Corbet and Andrew G. Peele*	L33
THE TEMPERATURE AND COOLING AGE OF THE WHITE DWARF COMPANION TO THE MILLISECOND PULSAR PSR B1855+09 *M. H. van Kerkwijk, J. F. Bell, V. M. Kaspi, and S. R. Kulkarni*	L37
RR LYRAE STARS IN NGC 6388 AND NGC 6441: A NEW OOSTERHOFF GROUP? *Barton Pritzl, Horace A. Smith, Márcio Catelan, and Allen V. Sweigart*	L41
EVOLUTIONARY MODEL AND OSCILLATION FREQUENCIES FOR α URSAE MAJORIS: A COMPARISON WITH OBSERVATIONS *D. B. Guenther, P. Demarque, D. Buzasi, J. Catanzarite, R. Laher, T. Conrow, and T. Kreidl*	L45
BROAD Hα WING FORMATION IN THE PLANETARY NEBULA IC 4997 *Hee-Won Lee and Siek Hyung*	L49
INSTRUCTIONS TO AUTHORS OF LETTERS, AND ADDITIONAL USEFUL INFORMATION	*Inside Back Cover*
INSTRUCTIONS FOR ELECTRONIC MANUSCRIPT SUBMISSION	*Back Cover*

2000 FEBRUARY 20, NUMBER 2

	Page
YOUNG RED SPHEROIDAL GALAXIES IN THE HUBBLE DEEP FIELDS: EVIDENCE FOR A TRUNCATED INITIAL MASS FUNCTION AT ~2 $M_\odot$ AND A CONSTANT SPACE DENSITY TO $z \sim 2$ *Tom Broadhurst and Rychard J. Bouwens*	L53
PRIMORDIAL LITHIUM AND BIG BANG NUCLEOSYNTHESIS *Sean G. Ryan, Timothy C. Beers, Keith A. Olive, Brian D. Fields, and John E. Norris*	L57

THE SPACE DENSITY OF PRIMORDIAL GAS CLOUDS NEAR GALAXIES AND GROUPS AND THEIR RELATION TO GALACTIC HIGH-VELOCITY CLOUDS — L61
Martin A. Zwaan and Frank H. Briggs

BROAD EMISSION LINE REGIONS IN ACTIVE GALACTIC NUCLEI: THE LINK WITH THE ACCRETION POWER — L65
Fabrizio Nicastro

CONVERSION OF NEUTRON STARS TO STRANGE STARS AS THE CENTRAL ENGINE OF GAMMA-RAY BURSTS — L69
Ignazio Bombaci and Bhaskar Datta

COMPARING THE EVOLUTION OF THE GALAXY DISK SIZES WITH COLD DARK MATTER MODELS: THE HUBBLE DEEP FIELD — L73
E. Giallongo, N. Menci, F. Poli, S. D'Odorico, and A. Fontana

THE X-RAY EMISSION OF THE CENTAURUS A JET — L77
G. T. Birk and H. Lesch

CHANDRA X-RAY DETECTION OF THE RADIO HOT SPOTS OF 3C 295 — L81
D. E. Harris, P. E. J. Nulsen, T. J. Ponman, M. Bautz, R. A. Cameron, L. P. David, R. H. Donnelly, W. R. Forman, L. Grego, M. J. Hardcastle, J. P. Henry, C. Jones, J. P. Leahy, M. Markevitch, A. R. Martel, B. R. McNamara, P. Mazzotta, W. Tucker, S. N. Virani, and J. Vrtilek

THE ELUSIVE OLD POPULATION OF THE DWARF SPHEROIDAL GALAXY LEO I — L85
E. V. Held, I. Saviane, Y. Momany, and G. Carraro

EMISSION LINES IN THE SPECTRUM OF THE ^{3}He STAR 3 CENTAURI A — L89
T. A. A. Sigut, J. D. Landstreet, and S. L. S. Shorlin

FORMATION OF MILLISECOND PULSARS WITH HEAVY WHITE DWARF COMPANIONS: EXTREME MASS TRANSFER ON SUBTHERMAL TIMESCALES — L93
Thomas M. Tauris, Edward P. J. van den Heuvel, and Gerrit J. Savonije

A SECOND LUMINOUS BLUE VARIABLE IN THE QUINTUPLET CLUSTER — L97
T. R. Geballe, F. Najarro, and D. F. Figer

DOES TURBULENCE IN THE IRON CONVECTION ZONE CAUSE THE MASSIVE OUTBURSTS OF η CARINAE? — L103
Richard B. Stothers

η CARINAE: TESTING A BINARY ORBIT MODEL WITH THE *HUBBLE SPACE TELESCOPE*/SPACE TELESCOPE IMAGING SPECTROGRAPH — L107
Kris Davidson, Kazunori Ishibashi, Theodore R. Gull, Roberta M. Humphreys, and Nathan Smith

FIRST LIGHT MEASUREMENTS OF CAPELLA WITH THE LOW-ENERGY TRANSMISSION GRATING SPECTROMETER ABOARD THE *CHANDRA X-RAY OBSERVATORY* — L111
A. C. Brinkman, C. J. T. Gunsing, J. S. Kaastra, R. L. J. van der Meer, R. Mewe, F. Paerels, A. J. J. Raassen, J. J. van Rooijen, H. Bräuninger, W. Burkert, V. Burwitz, G. Hartner, P. Predehl, J.-U. Ness, J. H. M. M. Schmitt, J. J. Drake, O. Johnson, M. Juda, V. Kashyap, S. S. Murray, D. Pease, P. Ratzlaff, and B. J. Wargelin

SUBMILLIMETER POLARIMETRY OF THE PROTOSTELLAR OUTFLOW SOURCES IN SERPENS WITH THE SUBMILLIMETER COMMON-USER BOLOMETER ARRAY — L115
Christopher J. Davis, Antonio Chrysostomou, Henry E. Matthews, Tim Jenness, and Thomas P. Ray

GROWTH OF AN INITIAL MASS FUNCTION CLUSTER IN A TURBULENT DENSE CORE — L119
P. C. Myers

EXTENDED FAR-INFRARED CO EMISSION IN THE OMC-1 CORE OF ORION — L123
María J. Sempere, José Cernicharo, Bertrand Lefloch, Eduardo González-Alfonso, and Sarah Leeks

O-BEARING MOLECULES IN CARBON-RICH PROTO–PLANETARY OBJECTS — L129
F. Herpin and J. Cernicharo

RINGS IN THE PLANETESIMAL DISK OF β PICTORIS — L133
P. Kalas, J. Larwood, B. A. Smith, and A. Schultz

NUMERICAL SIMULATIONS OF OSCILLATION MODES OF THE SOLAR CONVECTION ZONE — L139
D. Georgobiani, A. G. Kosovichev, R. Nigam, Å. Nordlund, and R. F. Stein

INSTRUCTIONS TO AUTHORS OF LETTERS, AND ADDITIONAL USEFUL INFORMATION — *Inside Back Cover*

INSTRUCTIONS FOR ELECTRONIC MANUSCRIPT SUBMISSION — *Back Cover*